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| 20350 7590 07/09/2007 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834 | | | EXAMINER | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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| | Application No. | Applicant(s) | | | | |
| | 10/646,550 | TSUZUKI ET AL. | | | | |
| Office Action Summary | Examiner | Art Unit | | | | |
| | Ian N. Moore | 2616 | | | | |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply | | | | | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DATE - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period was reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). | ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from 1, cause the application to become ABANDONE | I. sely filed the mailing date of this communication. D (35 U.S.C. § 133). | | | | |
| Status | | | | | | |
| 1) Responsive to communication(s) filed on 22 Au | <u>ugust 2003</u> . | | | | | |
| 2a) This action is FINAL 2b) ⊠ This | This action is FINAL . 2b)⊠ This action is non-final. | | | | | |
| • | Since this application is in condition for allowance except for formal matters, prosecution as to the merits is | | | | | |
| closed in accordance with the practice under E | closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. | | | | | |
| Disposition of Claims | | | | | | |
| 4) ⊠ Claim(s) 1-13 is/are pending in the application. 4a) Of the above claim(s) is/are withdray 5) □ Claim(s) is/are allowed. 6) ⊠ Claim(s) 1 and 9 is/are rejected. 7) ⊠ Claim(s) 2-8,10-13 is/are objected to. 8) □ Claim(s) are subject to restriction and/or | vn from consideration. | | | | | |
| Application Papers | | , . | | | | |
| 9) ☐ The specification is objected to by the Examine 10) ☐ The drawing(s) filed on 22 August 2003 is/are: Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) ☐ The oath or declaration is objected to by the Ex | a) accepted or b) objected to drawing(s) be held in abeyance. See ion is required if the drawing(s) is obj | e 37 CFR 1.85(a). ected to. See 37 CFR 1.121(d). | | | | |
| Priority under 35 U.S.C. § 119 | | | | | | |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. | | | | | | |
| Attachment(s) | | | | | | |
| Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 8-22-03: 5-29-07. | 4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other: | nte | | | | |

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DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains a legal phraseology "comprises" in line 1. Correction is required. See MPEP § 608.01(b).

The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.

Claim Objections

2. Claims 1-13 are objected to because of the following informalities:

Claim 1 recites, "a data packet" recited in lines 16, 23 and 25. For clarity, it is suggested to change both "a data packet" recited in line 23 and 25 to "the data packet", respectively.

Claim 9 is also objected for the same reason as set forth above in claim 1.

Claim 2 recites, "a data packet" recited in lines 5 and 9. For clarity and consistency with "a data packet" recited in claim 1, line 16, it is suggested to change both "a data packet" recited in line 5 and 9 to "the data packet", respectively.

Claim 4 recites, "a data packet" recited in lines 5 and 9. For clarity and consistency with "a data packet" recited in claim 1, line 16, it is suggested to change both "a data packet" recited in line 5 and 9 to "the data packet", respectively.

Claim 4 recites, "a session control packet" recited in lines 7 and 13. For clarity and consistency, it is suggested to change "a session control packet" recited in line 13 to "the session control packet".

Claim 10 is also objected for the same reason as set forth above in claim 4.

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Claim 4 recites, "the results of the virtual address assignment" in line 29. It is suggested to change "the results of the virtual address assignment" to "results of virtual IPv4 address and virtual IPv6 address assignment".

Claim 10 is also objected for the same reason as set forth above in claim 4.

Claim 4 recites, "a data packet" in line 39 and 41. For clarity and consistency with "a data packet" recited in line 32, it is suggested to change both "a data packet address" recited in lines 39 and 41 to "the data packet".

Claim 10 is also objected for the same reason as set forth above in claim 4.

Claim 4 recites, "an IPv4 address" recited in line 8 and 21. For clarity and consistency, it is suggested to change "an IPv4 address" recited in line 21 to "the IPv4 address".

Claim 4 recites "an IPv6 address" recited in line 9 and 21. For clarity and consistency, it is suggested to change "an IPv6 address" recited in line 21 to "the IPv6 address".

Claim 6 recites, "a request for assigning a virtual IPv6 address" in line 4 and "a request for assigning a virtual IPv4 address" in line 7. For clarity and consistency with "a request" recited in claim 4, line 19, it is suggested to change "a request for assigning a virtual IPv6 address" in line 4 to "the request for assigning a virtual IPv6 address", and change "a request for assigning a virtual IPv4 address" in line 7 to "the request for assigning a virtual IPv4 address" in line 7."

Claim 12 is also objected for the same reason as set forth above in claim 6.

Claim 6 recites, "a request" in lines 4 and 7. For clarity and consistency with "a request" recited in claim 4, line 19, it is suggested to change both "a request" in lines 4 and 7 to "the request".

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Claim 12 is also objected for the same reason as set forth above in claim 6.

Claim 6 recites, "a virtual IPv6 address" in line 4. For clarity and consistency with "a virtual IPv6 address" recited in claim 4, line 20, it is suggested to change "a virtual IPv6 address" in line 4 to "the virtual IPv6 address".

Claim 12 is also objected for the same reason as set forth above in claim 6.

Claim 6 recites, "a virtual IPv4 address" in line 7. For clarity and consistency with "a virtual IPv4 address" recited in claim 4, line 20, it is suggested to change "a virtual IPv4 address" in line 7 to "the virtual IPv4 address".

Claim 12 is also objected for the same reason as set forth above in claim 6.

Claim 6 recites, "a IPv4 address" in line 5. For clarity and consistency with "a IPv4 address" recited in claim 4, line 8, it is suggested to change "a IPv4 address" in line 5 to "the IPv4 address".

Claim 12 is also objected for the same reason as set forth above in claim 6.

Claim 6 recites, "a IPv6 address" in line 8. For clarity and consistency with "a IPv6 address" recited in claim 4, line 9, it is suggested to change "a IPv6 address" in line 8 to "the IPv6 address".

Claim 12 is also objected for the same reason as set forth above in claim 6.

Claims 3,5,7,8,11 and 13 are also objected since they are depended upon objected claims 1, 4 and 10 set forth above.

Appropriate corrections are required.

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Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamamoto (US006038233A) in view of Pitcher (US. 5,790,554).

Regarding Claim 1, Hamamoto discloses an IP address translator (see FIG. 1, 2 and 10A, Translator 55) located between an IPv4 network (see FIG. 1, IP V4 network 54) and an IPv6 network (see FIG. 1, IP V6 network 52; see col. 6, line 1-17), comprising:

means for assigning (see FIG. 2, a combined system of IPv4/v6 transmission/reception processing units 31-32 and header translation unit 33 performs assigning), in a process of establishing a session (see FIG. 1, a communication section) between an IPv4 apparatus (see FIG. IPv4 host 53) having an IPv4 address (see FIG. 1, IPv4 address) and an IPv6 apparatus (see FIG. 1, IPv6 host 51) having an IPv6 address (see FIG. 1, IPv6 address), a virtual IPv6 address (see FIG. 1, IPv4-mapped-IPv6 address (e.g. :::ffff::133.144.95.22); see FIG. 12A) to the IPv4 apparatus and a virtual IPv4 address (see FIG. 1, assigned IPv4 address (e.g. :133.144.95.22)) to the IPv6 apparatus (see col. 6, line 1-35; see col. 7, line 55 to col. 8, line 30);

an address translation table (see FIG. 2, 7, address translation information table 35) for storing a correspondence relation between the IPv4 address (see FIG. 1, IPv4 host 53 address (e.g. 192.168.10.3)) and the virtual IPv6 address (see FIG. 1, IPv4-mapped-IPv6 address (e.g. :::ffff::133.144.95.22)), a correspondence relation between the IPv6 address (see FIG. 1, IPv6

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address of IPv6 host 51 (e.g. ::1234:5678:9abc)) and the virtual IPv4 address (see FIG. 1, assigned/mapped IPv4 address (e.g. :133.144.95.22); also see FIG. 7, see col. 7, line 5- to col. 8, line 40; see col. 9, line 2510, line 42), and information in association with each of the virtual addresses (see FIG. 7, option 93 associates/corresponds to each assigned/mapped addresses; see col. 8, line 30-40); and

address translation processor (see FIG. 2, a combined system of header translation unit 33 and address translation information exchange unit 34) for translating IP addresses of a data packet received from the IPv4 apparatus (see FIG. 1, translating IP address of IP packet from IPv4 host 53) or the IPv6 apparatus (see FIG. 1, translating IP address of IP packet from IPv6 host 51) in accordance with the address translation table (see FIG. 2, address translation information table 35; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65)

the address translation processor having means for checking header information of each of data packets to be subjected to address translation on the basis of the information stored in the address translation table (see FIG. 2, the combined translation system 33-34 verifies/checks/determines address information in the header of each IP packet for address translation according to the information stored in the address translation table; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65), and executing address translation on a data packet which adapts to the information (see FIG. 2, the combined translation system 33-34 executes the address translation on the IP packet in which changes (i.e. IPv4 vs.IPv6) according to the stored information; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65).

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Hamamoto does not explicitly disclose a filter and discarding a data packet which does not adapt to the filter information. However, Pitcher teaches a packet transfer apparatus (see FIG. 1, network device 100) comprising

an address translation table (see FIG. 2, packet filters table) for storing filter information in association with each of the addresses (see col. 5, line 10-30; see col. 6, line 20-45,66 to col. 7, line 15; packet filter table stores packet filter information and its corresponding address); and

checking header information of each of data packets to be subjected to the basis of the filter information stored in the address translation table (see col. 6, line 20-350; see col. 9, line 1-35; determining/evaluating the address information in the header of the packet according to the stored filter table), discarding a data packet which does not adapt to the filter information (see col. 6, line 20-350; see col. 9, line 1-35; dropping/discarding the packet if it does not meet the filtering requirement), and executing on a data packet which adapts to the filter information (see col. 6, line 20-350; see col. 9, line 1-35; forwarding the packet which adapts according to the stored filter table).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to a filter and discarding a data packet which does not adapt to the filter information, as taught by Pitcher in the system of Hamamoto, so that it would provide filtering onto a network coupled thereto based on the content of the data packet; see Pitcher col. 3, line 46-55.

Regarding Claim 9, Hamamoto discloses a packet transfer apparatus (see FIG. 1, 2 and 10A, Translator 55) comprising a plurality of line interfaces (see FIG. 10A, network interfaces 73-n), a plurality of protocol processing units each provided for each of the line interfaces (see

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FIG. 2, transmit and receive IP protocols process units 31 and 32 for each network interface 73), and a switching unit (see FIG. 10A, switching bus that couples to network interfaces 73-n) for switching packets among the plurality of protocol processing units (see col. 13, line 20-35; switching IP packets among processing units), wherein one of the line interfaces is connected to a payload converter (see FIG. 2, network interface is connection to translation units 22 and 34; see col. 6, line 5-35), and at least one of protocol processing units which is accompanying a line interface connected to an IPv4 network (see FIG. 1, IP V4 network 54) or an IPv6 network (see FIG. 1, IP V6 network 52; see col. 6, line 1-17) is comprised of:

means for assigning (see FIG. 2, a combined system of IPv4/v6 transmission/reception processing units 31-32 and header translation unit 33 performs assigning), in a process of establishing a session (see FIG. 1, a communication section) between an IPv4 apparatus (see FIG. IPv4 host 53) having an IPv4 address (see FIG. 1, IPv4 address) and an IPv6 apparatus (see FIG. 1, IPv6 host 51) having an IPv6 address (see FIG. 1, IPv6 address), a virtual IPv6 address (see FIG. 1, IPv4-mapped-IPv6 address (e.g. :::ffff::133.144.95.22); see FIG. 12A) to the IPv4 apparatus and a virtual IPv4 address (see FIG. 1, assigned IPv4 address (e.g. :133.144.95.22)) to the IPv6 apparatus (see col. 6, line 1-35; see col. 7, line 55 to col. 8, line 30);

an address translation table (see FIG. 2, 7, address translation information table 35) for storing a correspondence relation between the IPv4 address (see FIG. 1, IPv4 host 53 address (e.g. 192.168.10.3)) and the virtual IPv6 address (see FIG. 1, IPv4-mapped-IPv6 address (e.g. :::ffff::133.144.95.22)), a correspondence relation between the IPv6 address (see FIG. 1, IPv6 address of IPv6 host 51 (e.g. ::1234:5678:9abc)) and the virtual IPv4 address (see FIG. 1, assigned/mapped IPv4 address (e.g. :133.144.95.22); also see FIG. 7, see col. 7, line 5- to col. 8,

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line 40; see col. 9, line 2510, line 42), and information in association with each of the virtual addresses (see FIG. 7, option 93 associates/corresponds to each assigned/mapped addresses; see col. 8, line 30-40); and

address translation processor (see FIG. 2, a combined system of header translation unit 33 and address translation information exchange unit 34) for translating IP addresses of a data packet received from the IPv4 apparatus (see FIG. 1, translating IP address of IP packet from IPv4 host 53) or the IPv6 apparatus (see FIG. 1, translating IP address of IP packet from IPv6 host 51) in accordance with the address translation table (see FIG. 2, address translation information table 35; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65)

the address translation processor having means for checking header information of each of data packets to be subjected to address translation on the basis of the information stored in the address translation table (see FIG. 2, the combined translation system 33-34 verifies/checks/determines address information in the header of each IP packet for address translation according to the information stored in the address translation table; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65), and executing address translation on a data packet which adapts to the information (see FIG. 2, the combined translation system 33-34 executes the address translation on the IP packet in which changes (i.e. IPv4 vs.IPv6) according to the stored information; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65).

Hamamoto does not explicitly disclose a filter and discarding a data packet which does not adapt to the filter information. However, Pitcher teaches a packet transfer apparatus (see FIG. 1, network device 100) comprising

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an address translation table (see FIG. 2, packet filters table) for storing filter information in association with each of the addresses (see col. 5, line 10-30; see col. 6, line 20-45,66 to col. 7, line 15; packet filter table stores packet filter information and its corresponding address); and

checking header information of each of data packets to be subjected to the basis of the filter information stored in the address translation table (see col. 6, line 20-350; see col. 9, line 1-35; determining/evaluating address conation in the header of the packet according to the stored filter table), discarding a data packet which does not adapt to the filter information (see col. 6, line 20-350; see col. 9, line 1-35; dropping/discarding the packet if it does not meet the filtering requirement), and executing on a data packet which adapts to the filter information (see col. 6, line 20-350; see col. 9, line 1-35; forwarding the packet which adapts according to the stored filter table).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to a filter and discarding a data packet which does not adapt to the filter information, as taught by Pitcher in the system of Hamamoto, so that it would provide filtering onto a network coupled thereto based on the content of the data packet; see Pitcher col. 3, line 46-55.

Allowable Subject Matter

Dependent Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

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Claim 2 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose or render obvious the following italic limitations:

In claim 2, ... wherein the filter information... specifics a source IPv6 address and a destination port number to be used in a data packet having the virtual IPv4 address as a destination address... wherein the filter information... specifics a source IPv4 address and a destination port number to be used in a data packet having the virtual IPv6 address as a destination address, in combination with other limitations recited as specified in Claim 2.

Claims 4,6,10 and 12 are objected to as set forth in paragraph 2, but would be allowable if rewritten to overcome the objections. The following are the statement of reasons for the indication of allowable subject matter:

Independent Claims 4 and 10 are allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose or render obvious the following italic limitations:

In independent claim 4, ... transferring the session control packet to a payload converter in a form of an encapsulated packet, translating when an encapsulated packet including a session control packet having been subjected to payload conversion...IP address of the secession control packet extracted from the encapsulated packet, and transferring the resultant packet to a destination network..., in combination with other limitations recited as specified in Claim 4.

In independent claim 10, ... transferring the session control packet to a payload converter in a form of an encapsulated packet, translating when an encapsulated packet

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including a session control packet having been subjected to payload conversion...IP address of the secession control packet extracted from the encapsulated packet, and transferring the resultant packet to a destination network.., in combination with other limitations recited as specified in Claim 10.

Note that the first closet prior art Hamamoto (US006038233A) discloses an IP address translator (see FIG. 1, 2 and 10A, Translator 55) located between an IPv4 network (see FIG. 1, IP V4 network 54) and an IPv6 network (see FIG. 1, IP V6 network 52; see col. 6, line 1-17), comprising: means for assigning (see FIG. 2, a combined system of IPv4/v6 transmission/reception processing units 31-32 and header translation unit 33 performs assigning), in a process of establishing a session (see FIG. 1, a communication section) between an IPv4 apparatus (see FIG. IPv4 host 53) having an IPv4 address (see FIG. 1, IPv4 address) and an IPv6 apparatus (see FIG. 1, IPv6 host 51) having an IPv6 address (see FIG. 1, IPv6 address), a virtual IPv6 address (see FIG. 1, IPv4-mapped-IPv6 address (e.g. :::ffff::133.144.95.22); see FIG. 12A) to the IPv4 apparatus and a virtual IPv4 address (see FIG. 1, assigned IPv4 address (e.g. :133.144.95.22)) to the IPv6 apparatus (see col. 6, line 1-35; see col. 7, line 55 to col. 8, line 30); an address translation table (see FIG. 2, 7, address translation information table 35) for storing a correspondence relation between the IPv4 address (see FIG. 1, IPv4 host 53 address (e.g. 192.168.10.3)) and the virtual IPv6 address (see FIG. 1, IPv4-mapped-IPv6 address (e.g. :::ffff::133.144.95.22)), a correspondence relation between the IPv6 address (see FIG. 1, IPv6 address of IPv6 host 51 (e.g. ::1234:5678:9abc)) and the virtual IPv4 address (see FIG. 1, assigned/mapped IPv4 address (e.g.:133.144.95.22); also see FIG. 7, see col. 7, line 5- to col. 8, line 40; see col. 9, line 2510, line 42), and information in association with each of the virtual

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addresses (see FIG. 7, option 93 associates/corresponds to each assigned/mapped addresses; see col. 8, line 30-40); and address translation processor (see FIG. 2, a combined system of header translation unit 33 and address translation information exchange unit 34) for translating IP addresses of a data packet received from the IPv4 apparatus (see FIG. 1, translating IP address of IP packet from IPv4 host 53) or the IPv6 apparatus (see FIG. 1, translating IP address of IP packet from IPv6 host 51) in accordance with the address translation table (see FIG. 2, address translation information table 35; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65); the address translation processor having means for checking header information of each of data packets to be subjected to address translation on the basis of the information stored in the address translation table (see FIG. 2, the combined translation system 33-34 verifies/checks/determines each IP packet translation according to the information stored in the address translation table; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65), and executing address translation on a data packet which adapts to the information (see FIG. 2, the combined translation system 33-34 executes the address translation on the IP packet in which changes (i.e. IPv4 vs.IPv6) according to the stored information; see col. 6, line 15-35; see col. 8, line 1 to col. 9, line 11,35-65). However, Hamamoto fails to disclose or render obvious the above italic limitations.

Note that the second closet prior art Pitcher (US. 5,790,554) discloses a packet transfer apparatus (see FIG. 1, network device 100) comprising an address translation table (see FIG. 2, packet filters table) for storing filter information in association with each of the addresses (see col. 5, line 10-30; see col. 6, line 20-45,66 to col. 7, line 15; packet filter table stores packet filter information and its corresponding address); and checking header information of each of data packets to be subjected to the basis of the filter information stored in the address translation

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table (see col. 6, line 20-350; see col. 9, line 1-35; determining/evaluating according to the stored filter table), discarding a data packet which does not adapt to the filter information (see col. 6, line 20-350; see col. 9, line 1-35; dropping/discarding the packet if it does not meet the filtering requirement), and executing on a data packet which adapts to the filter information (see col. 6, line 20-350; see col. 9, line 1-35; forwarding the packet which adapts according to the stored filter table). However, Pitcher also fails to disclose or render obvious the above italic limitations.

Thus, Hamamoto and Pitcher, either standalone or in combination, fail to disclose the above italic limitations.

5. Dependent claims 3,5,7,8,11 and 13 are objected to as being dependent upon a objected base claims, but would be allowable if objected base claims are rewritten to overcome the objection set forth in paragraph 2.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ian N. Moore Art Unit 2616

6-25-07